

```

RESULT 1
h71993
; TOIG of: h71993 check: 7893 from: 1 to: 403
;
; LOCUS
; H71993 403 bp mRNA linear EST 26-OCT-1995
; DEFINITION
; Y798904.r1 Soares fetal liver spleen lNfLS Homo sapiens cDNA clone
; IMAGE:213366 5' similar to SP:F35G12.9 CE00978 ;, mRNA sequence.
;
; ACCESSION
; H71993
; VERSION
; H71993.1 GI:1043809
; KEYWORDS
; EST.
; SOURCE
; Homo sapiens
; ORGANISM
; Homo sapiens (human)
;
; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
;
; Hillier L., Lennon, G., Becker M., Bonaldo, M.F., Chiapelli, B.,
; Chisoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W.,
; Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, N.,
; Mardis, E., Moore, B., Morris, M., Parsons, J., Franke, C., Rifkin, L.,
; Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Mieg, J.,
; Trevasakis, E., Underwood, K., Wohlmann, P., Waterston, R., Wilson, R.,
; and Marra, M.
;
; REFERENCE
; 1 (bases 1 to 403)
;
; AUTHORS

```


provided by Dr. Bertrand Jordan. Library constructed and normalized by Bento Soares and M. Fatima Bonaldo."

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; ORIGIN
; AA260889 Length: 479 June 23, 2005 12:30 Type: N Check: 515
; aa260889
;
; Query Match 73.1%; Score 239.1; DB 1; Length 479;
; Best Local Similarity 88.4%; Pred. No. 0.9; Mismatches 34; Indels 3; Gaps 2;
; Matches 281; Conservative 0;
;
; QY 10 GCATGGATGTGATACCCCGAGCGGCACCACACAGCGCGCGGCCAAGAAGCGCTTTGAA 69
; Db |||||||
; 26 CGCATGGATGTGATACCCCGAGCGGCACCACACAGCGGC-CGAGCAAGAAGCGATTGAA 84
; QY 70 GTGAAAAGTGAATGACAGCCTCTGGGCTGGGATATGTGTTGATAACTGTGCC 129
; Db |||||||
; 85 GTTAAAAAGTGAATGACAGTGCCCTCT--GCTGGGACATGTGTTGTAATCTGTGCC 142
; QY 130 ATCTGCAGGAACACATTTATGATCTTTTCATAGATGTCAAGCTTAACACAGCGCTCCGCT 189
; Db |||||||
; 143 ATCTGCAGGAGCACATTTATGATCTTTTCATGATGTGAGCCACACAGCGCTCACTA 202
; QY 190 ACTTCAGAAGTGTACTGTCGCATGGGGAGTCTTAACCATGCTTTTCATCTCCATGTC 249
; Db |||||||
; 203 CGTTCGAAGAGTGTACGTTTCATCGGGAGTCTGCAACCATGCTTTTCATCTCCATGTC 262
; QY 250 ATCTCTCGCTGCTCAAAACACAGAGTGTCTCATTTGGACACACAGAGTGGGAATTC 309
; Db |||||||
; 263 ATCTCTCGATGCTCAAAACAGGAGGAGTGTCTGTTGGACAACAGAGTGGGAGTTTC 322
; QY 310 CAAAGTATGGCACTAG 327
; Db |||||||
; 323 CAGAAGTATGGCACTTAG 340
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; RESULT 4
; aa260889/c
; TOIG of: aa260889 check: 515 from: 1 to: 479
;
; LOCUS H71993 479 bp mRNA linear EST 18-MAR-1997
; DEFINITION YR9804.r1 Soares mouse lymph node NBMLN Mus musculus cDNA clone
; IMAGE:721697 5' similar to WP:ZK287.5 CE06614 ; mRNA sequence.
; ACCESSION H71993
; VERSION AA260889
; KEYWORDS EST.
; SOURCE Mus musculus (house mouse)
; ORGANISM Mus musculus
; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
; REFERENCE 1 (bases 1 to 479)
; AUTHORS Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
; Geisel,S., Kucaba,T., Lacy,M., Martin,J., Morris,M.,
; Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
; Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
; Waterston,R.
; TITLE The WashU-HMI Mouse EST Project
; JOURNAL Unpublished (1996)
; COMMENT Contact: Marra M/Mouse EST Project
; Washington University School
; 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
; Tel: 314 286 1800
; Fax: 314 286 1810
; Email: mouseest@wustl.wustl.edu
; This clone is available royalty-free through LLNL ; contact the
; IMAGE Consortium (info@image.llnl.gov) for further information.
; MG1:447193
; Seq primer: -28m13 rev2 ET from Amersham
; High quality sequence stop: 400.
; Location/Qualifiers
; 1..479
; /organism="Mus musculus"

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RESULT 1
w66989      ; TOIG of: w66989  check: 1388  from: 1  to: 366
;
; LOCUS      w66989      366 bp  mRNA  linear  EST 14-JUN-1996
; DEFINITION  me30a03.r1 Soares mouse embryo NbME13.5 14.5 Mus musculus cDNA
; ; Clone IMAGE:388972 5' similar to WP:F35G12.9 CE00978 i, mRNA
; ; sequence.
; ACCESSION  w66989
; ;
; ; VERSION  w66989.1  GI:1375916
; ; KEYWORDS  EST
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Db 154 CTCGAGGAACACCATTTATGATCTTTGTATCGAATGTCAGGCCAACACCGCGTCACGTAC 213
QY 64 rSerGluGluCysThrValAlaTrpGlyValCysAsnHisAlaPheHisCysAl 84
Db 214 TTCGGAAGAGTGACGGTTCATGGGGAGTCTCAACACCATGCTTTTCATTTCCACGTGCAT 273
QY 84 eSerArgTrpLeuLysThrArgGlnValCysProLeuAspAsnArgGluTrpGluPheG1 104
Db 274 CTCTCGATGGCTCAAAACGAGGAGCGTGTGCTGTTGGACACAGAGAGTGGGAGTTCCA 333
QY 104 nLysTyrGlyHis 108
Db 334 GAAGTATGGGCAT 346

RESULT 2
h71993
; TOIG of: h71993 check: 7893 from: 1 to: 403
; LOCUS H71993 403 bp mRNA linear EST 26-OCT-1995
; DEFINITION Yr98G04.r1 Soares fetal liver spleen INFLS Homo sapiens cDNA clone
; IMAGE:213366 5' similar to SP:F35612.9 CE00978 ;, mRNA sequence.
; ACCESSION H71993
; VERSION H71993.1 GI:1043809
; KEYWORDS EST.
; SOURCE Homo sapiens (human)
; ORGANISM Homo sapiens
; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
; 1 (bases 1 to 403)
; Hillier, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B.,
; Chiesse, S., Dietrich, N., DuBuque, T., Favellio, A., Gish, W.,
; Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N.,
; Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Rifkin, L.,
; Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierney-Weg, J.,
; Trevaaskis, E., Underwood, K., Wohlmann, P., Waterston, R., Wilson, R.
; and Marra, M.
; Generation and analysis of 280,000 human expressed sequence tags
; Genome Res. 6 (9), 807-828 (1996)
; 97044478
; PUBMED 8889549
; CONTACT: Wilson RK
; Washington University School of Medicine
; 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
; Tel: 314 286 1800
; Fax: 314 286 1810
; Email: est@watson.wustl.edu
; Insert Size: 553
; High quality sequence stops: 308
; This clone is available royalty-free through LLNL ; contact the
; IMAGE Consortium (info@image.llnl.gov) for further information.
; Insert Length: 553 Std Error: 0.00
; Seq primer: M13RP1
; High quality sequence stop: 308.
; Location/Qualifiers
; 1. 403
; /organism="Homo sapiens"
; /mol_type="mRNA"
; /db_xref="GDB:3778670"
; /db_xref="taxon:9606"
; /clone="IMAGE:213366"
; /sex="male"
; /dev_stage="20 week-post conception fetus"
; /lab_host="DH10B (ampicillin resistant)"
; /clone_lib="Soares fetal liver spleen INFLS"
; /note="Organ: Liver and Spleen; Vector: pT7T3D (Pharmacia)
; with a modified polylinker; Site 1: Pac I; Site 2: Eco RI;
; 1st strand cDNA was primed with a Pac I - oligo(dT) primer
; [5', AACTGGAAGATTAATTAAGACTTTTCTTTTCTTTTCTTTT 3'],
; double-stranded cDNA was ligated to Eco RI adaptors
; (Pharmacia), digested with Pac I and cloned into the Pac I
; and Eco RI sites of the modified pT7T3 vector. Library
; went through one round of normalization. Library
```

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; ORIGIN
; constructed by Bento Soares and M.Fatima Bonaldo."
; H71993 Length: 403 June 23, 2005 12:30 Type: N Check: 7893 ..
h71993

Alignment Scores:
Pred. No.: 0.0944 Length: 403
Score: 530.00 Matches: 100
Percent Similarity: 95.24% Conservative: 0
Best Local Similarity: 95.24% Mismatches: 4
Query Match: 86.04% Indels: 3
DB: 1 Gaps: 0

US-09-541-462B-2 (1-108) x h71993 (1-403)

QY 4 AlaMetAspValAspThrProSerGlyThrAsnSerGlyAlaGlyLysLysArgPheGlu 23
Db 14 GCGATGGATGTGGATACCCGAGCGGCACCAACAGCGCGNGC-AAGAAGCGCTTTGAA 72
QY 24 ValLysLysTrpAsnAlaValAlaLeuTrpAlaTrpAspIleValValAspAsnCysAla 43
Db 73 GTGAAAAGTGGAAATGCAGTAGCCCTCTCGCTNGG-GATATTGTGTTGATTAACGTGCC 131
QY 44 IleCysArgAsnHisIleMetAspLeuCysIleGluCysGlnAlaAsnGlnAlaSerAla 63
Db 132 ATCTCGAGAACACCATATTATGATCTTTGTCATAGATGTCAAGCTAACAGCGGTCGGT 191
QY 64 ThrSerGluGluCysThrValAlaTrpGlyValCysAsnHisAlaPheHisCys 83
Db 192 ACTTCAGAAAGAGTACTCTGCATGGGAGTCTGTAAACCATGCTTTTCACTTCCACTGC 251
QY 84 IleSerArgTrpLeuLysThrArgGlnValCysProLeuAspAsnArgGluTrp-GluPh 103
Db 252 ATCTCTCGCTGGCTCAAAACACGACAGGTGTGTCCATTGGACACAGAGTGGGGAATT 311
QY 103 eGlnLysTyrGly 107
Db 312 CCAAAAGTATGGG 324

RESULT 3
aa260889
; TOIG of: aa260889 check: 515 from: 1 to: 479
; LOCUS AA260889 479 bp mRNA linear EST 18-MAR-1997
; DEFINITION Y201109.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone
; IMAGE:1721697 5' similar to WP:ZK287.5 CE06614 ;, mRNA sequence.
; ACCESSION AA260889
; VERSION AA260889.1 GI:1897377
; KEYWORDS EST.
; SOURCE Mus musculus (house mouse)
; ORGANISM Mus musculus
; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
; 1 (bases 1 to 479)
; Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T.,
; Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
; Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B.,
; Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
; Waterston, R.
; The WashU-HMI Mouse EST Project
; Unpublished (1996)
; CONTACT: Marra M/Mouse EST Project
; WashU-HMI Mouse EST Project
; Washington University School of MedicineP
; 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
; Tel: 314 286 1800
; Fax: 314 286 1810
; Email: mouseest@watson.wustl.edu
; This clone is available royalty-free through LLNL ; contact the
; IMAGE Consortium (info@image.llnl.gov) for further information.
; MGI:447193
; Seq primer: -28m13 rev2 ET from Amersham
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; FEATURES
; High quality sequence stop: 400.
; Location/Qualifiers
; 1..479
; /organism="Mus musculus"
; /mol_type="mRNA"
; /strain="C57BL/6J"
; /db_xref="taxon:10090"
; /clone="IMAGE:721697"
; /sex="male"
; /tissue_type="lymph node"
; /dev_stage="4 weeks"
; /lab_host="DH10B"
; /clone_lib="Soares mouse lymph node NbMLN"
; /notes="Organ: lymph node; Vector: p7T3D-Pac (Pharmacia)
; with a modified polylinker; Site_1: Not I; Site_2: Eco RI;
; 1st strand cDNA was primed with a Not I - oligo(dT) primer
; [5',
; TGTTACCAATCTGAAGTGGAGCGCGGATGACTTTTTTTTTTTTTTTTTTTT
; 3']; double-stranded cDNA was ligated to Eco RI adaptors
; (Pharmacia), digested with Not I and cloned into the Not I
; and Eco RI sites of the modified p7T3 vector. RNA
; provided by Dr. Bertrand Jordan. Library constructed and
; normalized by Bento Soares and M.Fatima Bonaldo."
; ORIGIN
; AA260889 Length: 479 June 23, 2005 12:30 Type: N Check: 515
aa260889

Alignment Scores:
Pred. No.: 0.104 Length: 479
Score: 520.50 Matches: 97
Percent Similarity: 92.38% Conservative: 0
Best Local Similarity: 92.38% Mismatches: 6
Query Match: 84.50% Indels: 3
DB: 1 Gaps: 1

US-09-541-462B-2 (1-108) x aa260889 (1-479)

Qy 5 MetAspValAspThrProSerGlyThrAsnSerGlyValaGlyLysArgPheGluVal 24
Db 29 ATGGATGTGGATACCCCGGCGGACCAACACGCGCG-AGCAAGAGCGATTTGAAGTT 87
Qy 25 LysLysTrpAsnAlaValAlaLeuTrpAlaTrp-AspIleValValAspAsnCysAla 44
Db 88 AAAAAAGTGAATGCAAGTGGCCCTC---TGCTGGGACATTTGGTGTGATACTGTGCCAT 144
Qy 44 eCysArgAsnHisIleMetAspLeuCysIleGluCysGlnAlaAsnGlnAlaSerAla 64
Db 145 CTGCAGGGGACATATTATGGATCTTTGTATCGAATGTACGGCCACACGCGCTACTACG 204
Qy 64 rSerGluGluCysThrValAlaTrpGlyValCysAsnHisAlaPheHisCysIle 84
Db 205 TTCCGAGAGTGTACGGTTGCATGGGAGTCTGCAACCATGCTTTTCATTTCCACTGCAT 264
Qy 84 eSerArgTrpLeuLysThrArgGlnValCysProLeuAspAsnArgGluTrpGluPhe 104
Db 265 CTCTCGATGGCTCAAAACGAGGAGCGGTGTCTCCGTTGGCAACACAGAGATGGAGTTCCA 324
Qy 104 nLysTrpGlyHis 108
Db 325 GAAGTATGGGCAT 337

RESULT 4
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; TOIG of: aa260889 check: 515 from: 1 to: 479
; LOCUS AA260889 479 bp mRNA linear EST 18-MAR-1997
; DEFINITION va01h09.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone
; IMAGE:721697 5' similar to WP:ZK287.5 CE06614 ;, mRNA sequence.
; ACCESSION AA260889
; VERSION AA260889.1 GI:1897377
; KEYWORDS EST.
; SOURCE Mus musculus (house mouse)

; ORGANISM
; Mus musculus
; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelestomi;
; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
; 1 (bases 1 to 479)
; REFERENCE
; AUTHORS
; Marta, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T.,
; Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
; Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B.,
; Theising, B., Wylie, I., Lennon, G., Soares, B., Wilson, R. and
; Waterston, R.
; TITLE
; The WashU-HHMI Mouse EST Project
; JOURNAL
; Unpublished (1996)
; COMMENT
; Contact: Marra M/Mouse EST Project
; WashU-HHMI Mouse EST Project
; Washington University School of Medicine
; 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
; Tel: 314 286 1800
; Fax: 314 286 1810
; Email: mouseest@watson.wustl.edu
; This clone is available royalty-free through LML; contact the
; IMAGE Consortium (info@image.llnl.gov) for further information.
; MGI:447193
; Seq primer: -28mi3 rev2 ET from Amersham
; High quality sequence stop: 400.
; Location/Qualifiers
; 1..479
; /organism="Mus musculus"
; /mol_type="mRNA"
; /strain="C57BL/6J"
; /db_xref="taxon:10090"
; /clone="IMAGE:721697"
; /sex="male"
; /tissue_type="lymph node"
; /dev_stage="4 weeks"
; /lab_host="DH10B"
; /clone_lib="Soares mouse lymph node NbMLN"
; /notes="Organ: lymph node; Vector: p7T3D-Pac (Pharmacia)
; with a modified polylinker; Site_1: Not I; Site_2: Eco RI;
; 1st strand cDNA was primed with a Not I - oligo(dT) primer
; [5',
; TGTTACCAATCTGAAGTGGAGCGCGGATGACTTTTTTTTTTTTTTTTTTTT
; 3']; double-stranded cDNA was ligated to Eco RI adaptors
; (Pharmacia), digested with Not I and cloned into the Not I
; and Eco RI sites of the modified p7T3 vector. RNA
; provided by Dr. Bertrand Jordan. Library constructed and
; normalized by Bento Soares and M.Fatima Bonaldo."
; ORIGIN
; AA260889 Length: 479 June 23, 2005 12:30 Type: N Check: 515
aa260889

Alignment Scores:
Pred. No.: 0.104 Length: 479
Score: 520.50 Matches: 97
Percent Similarity: 92.38% Conservative: 0
Best Local Similarity: 92.38% Mismatches: 6
Query Match: 84.50% Indels: 3
DB: 1 Gaps: 1

US-09-541-462B-2 (1-108) x aa260889 (1-479)

Qy 5 MetAspValAspThrProSerGlyThrAsnSerGlyValaGlyLysArgPheGluVal 24
Db 29 ATGGATGTGGATACCCCGGCGGACCAACACGCGCG-AGCAAGAGCGATTTGAAGTT 87
Qy 25 LysLysTrpAsnAlaValAlaLeuTrpAlaTrp-AspIleValValAspAsnCysAla 44
Db 88 AAAAAAGTGAATGCAAGTGGCCCTC---TGCTGGGACATTTGGTGTGATACTGTGCCAT 144
Qy 44 eCysArgAsnHisIleMetAspLeuCysIleGluCysGlnAlaAsnGlnAlaSerAla 64
Db 145 CTGCAGGGGACATATTATGGATCTTTGTATCGAATGTACGGCCACACGCGCTACTACG 204
Qy 64 rSerGluGluCysThrValAlaTrpGlyValCysAsnHisAlaPheHisCysIle 84
Db 205 TTCCGAGAGTGTACGGTTGCATGGGAGTCTGCAACCATGCTTTTCATTTCCACTGCAT 264
Qy 84 eSerArgTrpLeuLysThrArgGlnValCysProLeuAspAsnArgGluTrpGluPhe 104
Db 265 CTCTCGATGGCTCAAAACGAGGAGCGGTGTCTCCGTTGGCAACACAGAGATGGAGTTCCA 324
Qy 104 nLysTrpGlyHis 108
Db 325 GAAGTATGGGCAT 337

RESULT 4
aa260889/c
; TOIG of: aa260889 check: 515 from: 1 to: 479
; LOCUS AA260889 479 bp mRNA linear EST 18-MAR-1997
; DEFINITION va01h09.r1 Soares mouse lymph node NbMLN Mus musculus cDNA clone
; IMAGE:721697 5' similar to WP:ZK287.5 CE06614 ;, mRNA sequence.
; ACCESSION AA260889
; VERSION AA260889.1 GI:1897377
; KEYWORDS EST.
; SOURCE Mus musculus (house mouse)

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RESULT 5

H71993 Length: 403 June 23, 2005 12:30 Type: N Check: 7893 ..
h71993

Alignment Scores:

Pred. No.:	5.25	Length:	403
Score:	39.00	Matches:	11
Percent Similarity:	41.38%	Conservative:	1
Best Local Similarity:	37.93%	Mismatches:	9
Query Match:	6.33%	Indels:	8
DB:	1	Gaps:	1

US-09-541-462B-2 (1-108) x h71993 (1-403)

QY	74	ValCysAsnHis-----	-----AlaPheHisPheHisCysIleSer	85
DB	125	GTATATCAACCAATATCCNAGCCAGAGGGCTACTGCATTCCACTTTTCACTTCAAAG	66	
QY	86	ArgTyrLeuLysThrArgGlnValCys	94	
DB	65	CGCTTCTTGCNCCGCGCTGTGTGTGC	39	

Search completed: June 23, 2005, 12:36:48
Job time : 0.001 secs

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